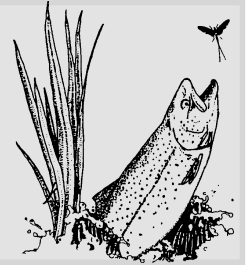


Stream Advocate



Adopt-A-Stream Program Newsletter

Spring 2004

RIFLS: VOLUNTEERS MEASURING STREAM FLOW ACROSS MASSACHUSETTS

Responding to increasing concern over stream flow, the **River Instream Flow Stewards (RIFLS)** program is training volunteers to record flow measurements on their local streams. **RIFLS is an innovative, science-based program aimed at addressing an environmental problem that has yet to receive the attention it deserves: the harm caused to rivers and streams by depleted and/or altered streamflows.** RIFLS is bringing together a diverse group of partners to provide technical assistance for documenting stream flow to protect and restore more natural flows and the aquatic communities they support. Stream Teams are often the first to notice problem low flows. As the local advocates active on their rivers, Stream Teams are poised to document problem stream flows and move forward on solutions.

Stream flow and water quantity have been hot topics during recent years and even during wet years some rivers and streams are still likely to run dangerously low or dry during late summer and early fall. Although streams and rivers in Massachusetts have natural low-flow periods, poor water management techniques such as excessive lawn watering, leaky pipes, sewers that discharge to other watersheds, manipulation of flows at dams, and urban sprawl can exacerbate low flow conditions and cause additional stress or even death to aquatic organisms and communities. In many cases the cause of unnaturally low flow is unknown and requires further investigation.

MEASURING STREAM FLOW

Three pilot RIFLS groups began this past summer in the Housatonic River Watershed and the South Coastal Watershed. Riverways staff trained a network of volunteers to record water depth in their river and enter the data into a publicly accessible, Internet-based database. In order to interpret the volunteer data, RIFLS is developing rating curves for each stream site, the crucial step to convert water depth into stream flow.

RIFLS is currently looking for a second round of interested partners. New groups getting involved with RIFLS will receive help organizing a local steering committee to choose sites and work with local volunteers. Riverways' RIFLS staff will install a staff gage at each site and take measurements to develop a rating curve that will accurately relate stream depth to stream flow. Volunteers will receive training on how to read the gages and then set up a schedule for recording measurements. At the end of the year, the Adopt-A-Stream

Program will work with RIFLS volunteers to come up with an Action Plan weighing the potential solutions for their river and community.

The solutions to low flow problems can often be complex, but fortunately there are a wide variety of practices that encourage groundwater recharge and healthy stream flow. Everything from decentralized sewage treatment options to on-site stormwater retention strategies to alternatives for lake drawdowns can be potential solutions to low stream flow problems. Even a single year's worth of data may yield enough insight to quantify a problem or document the need for more in-depth study and increase the chances that restoration activities will receive funding. Importantly, the collection and public accessibility of RIFLS stream flow data will increase awareness of the importance of healthy flows in our rivers and build a statewide constituency for maintaining and restoring more natural stream flows.

Stream Teams concerned about their local stream flows can apply to join the RIFLS Program and receive training. During the first year, a local steering committee will help identify important sites for monitoring and recruit volunteers for training. Adopt-A-Stream staff will help with organizing and action planning. The second year of the program allows an opportunity for individuals to learn how to set up staff gages at new sites and train new volunteers. Riverways is excited to offer this RIFLS "Certification" program for the first time this year because it will allow the network of river instream flow stewards to grow statewide.

To learn more about low flow issues in your watershed, visit the **Low Flow Inventory & RIFLS** website at www.state.ma.us/dfwele/river/rifls/rifls_home.html. If you have new observations or reports to add to the collection please contact Margaret Kearns, Watershed Ecologist, at (617) 626-1533 or margaret.kearns@state.ma.us.

Riverways staff taking water depth and velocity measurements on Larrywaug Brook in Stockbridge.



Stream Team Updates

RIPARIAN BUFFERS ALONG FOUR MILE BROOK

The Four Mile Brook Watershed Association (FMBWA) is working to install a riparian buffer to raise awareness about the functions and values of buffers and to encourage other property owners to install buffers on their own property. Adopt-A-Stream and Riverways staff assisted the group in identifying grant opportunities and a list of appropriate native species that could be planted in the area. In May 2003, Adopt-A-Stream and the Four Mile Brook Watershed Association (FMBWA) sponsored a Shoreline Survey of Four Mile Brook and Fisher Brook. After completing the survey, volunteers noted the replanting of riparian buffers as a key priority along the brook, especially in areas that had been previously flooded. They noted several locations where buffers would provide additional wildlife habitat, stabilize the bank and prevent erosion. FMBWA has worked in collaboration with the Town of Northfield to choose a visible location for the buffer installation, allowing residents to easily observe the progress of buffer planting and examples of plants that could be used.

In addition, Adopt-A-Stream provided examples of outreach brochures and assisted in preparing the grant application. Partnering with the Connecticut River Watershed Council, FMBWA applied for a grant to install the buffer and develop a brochure to be distributed to watershed residents. Adopt-A-Stream also provided technical guidance and support to FMBWA to submit a request for assistance from the Natural Resources Conservation Services interdisciplinary team to conduct a watershed assessment.

ASSESSING STORMWATER AT THE ALEWIFE RESERVATION

Adopt-A-Stream is working with the Friends of Alewife Reservation to create a monitoring group that will study plans for the stormwater wetland to be constructed in the Alewife Reservation as part of sewer separation in Cambridge. This group will help to make sure that the stormwater wetland will become an amenity and will enhance the Reservation and surrounding areas, creating added opportunities for learning and recreation. Adopt-A-Stream also helped the Friends to develop a grant proposal for assessing non-native invasive species in the Reservation. This group will continue to follow the construction process through the next few years.

TAUNTON RIVER WILD & SCENIC STREAM TEAMS

This spring, the Taunton River Wild & Scenic Committee is continuing to study the Taunton watershed and its tributaries to identify outstandingly remarkable characteristics. After conducting shoreline surveys on five upper watershed tributaries last fall, three lower watershed tributaries will be surveyed this spring: the Three Mile River, the Segregansett River and the Assonet River.

The surveys conducted in the fall revealed many outstanding resources in the upper watershed and engaged many local citizens in learning about these rivers. A survey of the Matfield River revealed that while there are serious water quality issues, the shoreline is well vegetated and provides good cover for wildlife. There are many historical resources on both headwater tributaries, the Matfield and the Town River, and

despite the presence of dams, there are many opportunities for canoeing and other recreation. Bridgewater has several public parks and open spaces near the river.

Excellent habitat and rare species were noted on the Winnetuxet River in Halifax, where the river is identified as core habitat in the Living Waters Atlas. The Nemasket River provides excellent canoeing and wildlife habitat, especially for the anadromous fishery which boasts over one million river herring each spring. Archeology and history are also prevalent in Middleborough, with evidence of 12,000 years of human habitation along the Nemasket and the Assawompsett Ponds. The Forge River in Raynham also contains excellent habitat, starting in the Hockomock Swamp area. Several dams on this river have created recreational opportunities in the small impoundments, but they also block fish passage. Aquatic weeds have also become an issue on the Forge River. There are several opportunities to improve access and recreation in Raynham as well.

The data gathered from these surveys and the Stream Team action plans will be shared with local officials and will be included in the Wild & Scenic Management Plan. The Stream Teams continue to meet and will be planning projects for the upcoming season.

STREAM TEAM IMPLEMENTATION AWARD PROJECTS:

Five groups in the SuAsCo and Housatonic Watersheds received Stream Team Implementation Awards for projects to be completed this spring.

The **Acton Stream Team** has partnered with the town on a Stream Signage/Stream Awareness Project. The project will increase public awareness and stewardship of the 13 streams in town by designing and installing signs for stream crossings and developing a brochure for distribution at a variety of public awareness/outreach efforts.

The **River Meadow Brook Community Association** is tracking rare turtles in Chelmsford. Partnering with the Massachusetts Watershed Coalition, their *Rare Turtle Habitat Monitoring Project* will study the individual ranges of the local population of rare wood turtles whose habitat is under threat of development.

(Continued on next page.)

Bull Frog from Forge River survey in Raynham.



River Continuity: Evaluating Fish and Wildlife Movement at Culverts and Bridges

Stream Teams have the opportunity to learn to identify and pursue solutions to stream crossings that act as barriers to fish and wildlife passage. The network of roads in our communities can fragment the continuity of our rivers and streams. Poorly designed culverts and bridges disrupt habitat by preventing fish and wildlife from reaching spawning grounds and other important habitat areas. Volunteers can learn to identify these problems and Riverways will work with Stream Teams to prioritize and plan for solutions.

As part of the River Continuity pilot project, Stream Team volunteers in the Westfield, Chicopee and Millers Watersheds have been identifying road crossings along streams and rivers that block or inhibit fish and wildlife passage. After a short training with Riverways staff, volunteers work in groups to assess culverts and bridges for sufficient water depth, substrate and appropriate flow velocity. Riverways staff will help volunteers develop Action Plans, prioritize problem crossings and plan potential remediation. Through a partnership with UMass Extension, River Continuity aims to reduce adverse impacts of road crossings on fish and wildlife movement. The program is currently looking for Stream Teams interested in working on River Continuity surveys.

Please contact the Adopt-A-Stream Program [(617) 626-1549 or rachel.calabro@state.ma.us] if your group is interested in learning more about the program. ~

Stream Team Updates - continued from previous page

Advocates in **Southborough, Westborough, Hopkinton and Ashland** are working to build the river constituency and educate the communities about storm water through their *Upper Sudbury River Corridor Storm Drain Marking Project*. In partnership with the Sudbury Open Land Foundation, volunteers will mark and paint stormdrains as part of an effort to educate residents about the affect of stormwater on local streams.

The **Great Barrington River Walk River Walk Irrigation and Biodiversity Program** will demonstrate biodiversity, vegetative buffers, stormwater mitigation and habitat enhancement along a section of the **Housatonic River**. Volunteers will install an irrigation system from roof runoff of a local business and apply a high quality soil to improve the conditions for native plant restoration.

The **Lowell Parks and Conservation Trust** is working as part of a larger effort with state and federal partners to restore a breeding population of Alewife to the **Concord River**. The *Alewife Restoration Project* will establish and train a volunteer base from normally underrepresented neighborhoods along the Concord River to monitor the alewife population. ~



Perched culvert on Yokum Brook in. The three-foot outlet drop prevents many species from reaching upstream habitat.

Technical Assistance Awards

The Massachusetts Riverways Adopt-A-Stream Program is excited to announce a new opportunity for Stream Teams to partner with Riverways technical staff on projects that work toward river protection. This new process will identify technical assistance needs of Stream Teams and work with those teams to build capacity, complete projects identified in their action plan and create opportunities for river projection and recreation. Adopt-A-Stream is soliciting project ideas from our partner groups for direct support by staff members. Recently, we have been assisting groups with project planning and grant writing, developing new protocols for photo-documentation and coordinating canoe launching sites with the state Public Access Board.

We will solicit project ideas in the form of a letter of inquiry on an ongoing basis with quarterly deadlines for the upcoming season. Staff will work with teams at any time to develop a project strategy or concept. We hope that this more formalized process will provide our staff and our partner groups with a clear outline for establishing project priorities and for securing the necessary permission (e.g. might be needed from landowners) and local support. Please feel free to call one of the staff with your project ideas. This spring we are working with the Parker River Clean Water Association on two Technical Assistance Award Projects, including a project to monitor low flows and educate the community about water withdrawals and a project to establish a new public access site on the Parker River. Staff will also work with the North and South River Watershed Association to implement an action plan for the Herring River. In the Blackstone, Adopt-A-Stream will present an evening workshop about using raingardens to infiltrate roof runoff and create habitat in the home landscape.

Applications for projects are accepted on a rolling basis due May 15th for summer projects. Please see application instructions on the Riverways website www.massriverways.org. ~

June is Rivers Month

June is Rivers Month! Each year the Riverways Programs compiles an annual Massachusetts Rivers Month Calendar as part of the national celebration of Rivers Month each June. See the calendar online for an opportunity to sample dozens of events in and around the rivers of Massachusetts from May 15th through July 4th, 2004. Take this opportunity to invite your friends, family, local leaders, legislators, and a favorite reporter to clean up, paddle, protect, enjoy and celebrate your favorite rivers and streams.

See www.massriverways.org for a full list of events happening on rivers across Massachusetts.

New EPA Watershed Outreach Guides Available

Getting in Step: Video and Guide for Conducting Watershed Outreach Campaigns.

The EPA recently announced a set of valuable new resources designed to assist local governments, watershed groups, watershed management agencies, and others to plan and conduct effective watershed outreach campaigns.

For a free copy of this guide and its companion video, please contact the National Service Center for Environmental Publications via phone at 1-800-490-9198 (from outside the U.S., call 1-513-489-8190) or via the Web at www.epa.gov/ncepihom. The book is also available as a PDF download at epa.gov/nps/outreach.html.

The **Adopt-A-Stream Program** works to support and encourage local stream teams and communities in efforts to protect and restore the ecological integrity of the Commonwealth's watersheds; rivers, streams and adjacent lands.

For more information or to receive our newsletter, please contact:

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Also check out our web-site:

www.massriverways.org

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Department of Fish and Game, David M. Peters, Commissioner

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